MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Firestone Building Products Company, LLC
250 West 96th Street
Indianapolis, IN 46260

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Firestone UltraPly TPO & TPO XR Single Ply Roof Systems over Recover Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews and revises NOA No. 09-0902.09 and consists of pages 1 through 60.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply Roofing
Material:	TPO
Deck Type:	Recover
Maximum Design Pressure	See specific deck type

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specifications	Product Description
UltraPly TPO	Various	TAS 131-95	Reinforced TPO 0.045" to 0.080" thick membrane.
UltraPly TPO XR 100	Various	TAS 131-95	Reinforced TPO.
UltraPly TPO XR 115	Various	TAS 131-95	Reinforced TPO.
UltraPly TPO Reinforced Curb Corner	Various	TAS 131-95	TPO curb flashing
UltraPly 18" Curb Flashing	Various	TAS 131-95	TPO curb flashing
UltraPly TPO Inside/Outside Corner	Various	TAS 131-95	Molded TPO for corner flashing
UltraPly TPO Large Pipe Flashing	Various	TAS 131-95	TPO flashing for large round penetrations
UltraPly TPO T-Joint Cover	Various	TAS 131-95	TPO flashing for T-joints
UltraPly TPO Penetration Kit	Various	TAS 131-95	Penetration sealing kit for UltraPly TPO
UltraPly TPO Walkway Pad	Various	TAS 131-95	TPO walkway pad
UltraPly TPO Coated Metal	Various	TAS 131-95	TPO laminated to hot-dipped galvanized steel for flashing
UltraPly TPO Premium Walkway Pad	Various	TAS 131-95	TPO walkway pad
UltraPly TPO Reinforced Split Pipe Boot	Various	TAS 131-95	TPO flashing for round penetrations 1" to 9" in diameter
UltraPly TPO 8" Reinforced Cover Strip	Various	TAS 131-95	8" wide 60 mil TPO cover strip
UltraPly TPO Universal Pipe Boot	Various	TAS 131-95	TPO flashing for round penetrations 1" to 6" in diameter
UltraPly TPO Unsupported Flashing	Various	TAS 131-95	Unreinforced TPO used for flashing
TPO QuickSeam Flashing	5-3/4" x 100'	Proprietary	Flashing material with pre-applied adhesive.

Product	Dimensions	Test Specifications	Product Description
UltraPly QuickSeam R.M.A. Strip	10" x 100'	Proprietary	Strip of UltraPly TPO with QuickSeam Tape for anchoring membrane to substrate.
Single-Ply QuickPrime Primer	1 gallon, 3 gallon	Proprietary	Primer for TPO QuickSeam Flashing.
EdgeGard System	Various	Various	Flashing materials and assemblies.
XR Bonding Adhesive	5 gal. pail	Proprietary	Solvent based adhesive.
UltraPly Bonding Adhesive	5 gal. pail	Proprietary	Solvent based adhesive.
XR Stick Membrane Adhesive	5 gal. pail	Proprietary	A low-rise polyurethane, low VOC, membrane adhesive.
I.S.O. Stick	5 gal & 1500 ml	Proprietary	A dual component polyurethane adhesive.
I.S.O. Twin Pack Insulation Adhesive	1500 ml	Proprietary	A dual component polyurethane adhesive.
I.S.O. Fix II	30 lbs.	Proprietary	A single component polyurethane adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ISO 95+ GL, ISO 95+ GL Tapered	Polyisocyanurate foam insulation	Firestone Bldg. Products
FiberTop E	Wood fiber insulation board	Firestone Bldg. Products
ISOGARD HD	Polyisocyanurate with a coated fiberglass facer	Firestone Bldg. Products
ISOGARD HD Composite	Polyisocyanurate with a coated fiberglass facer composite insulation.	Firestone Bldg. Products
DensDeck Prime	Silicon treated gypsum	Georgia Pacific Gypsum LLC
RESISTA	Polyisocyanurate foam core laminated to a coated fiberglass facer	Firestone Bldg. Products
Georgia-Pacific High Density Roof Fiberboard	Non-Asphaltic fiberboard Insulation	Georgia-Pacific Wood Products, LLC

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Heavy Duty Fastener	#15 Fastener for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
2.	All Purpose Fastener	#14 Fastener for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
3.	2-3/8" Barbed Seam Plate	Membrane seam attachment plate	2-3/8" diameter	Firestone Bldg. Products
4.	Pre-Assembled fastener & plate	#14 w/insulation plate for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
5.	Pre-Assembled Heavy Duty fastener & plate	#15 w/insulation plate for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
6.	Heavy Duty Plus Fastener	Insulation and membrane fastener	Various	Firestone Bldg. Products
7.	HD HailGard Fastener	Insulation and membrane fastener	Various	Firestone Bldg. Products
8.	Concrete Drive Fastener	Structural concrete fastener	Various	Firestone Bldg. Products
9.	Purlin Fasteners		Various	Firestone Bldg. Products
10.	Insulation Fastening Plate	Galvalume insulation plate	3" diameter	Firestone Bldg. Products
11.	HD Plus Seam Plate	Galvalume insulation plate	2¾" diameter	Firestone Bldg. Products
12.	HD Seam Plates	AZ55 or AZ50 galvalume insulation plate.	2-3/8" diameter	Firestone Bldg. Products
13.	Coiled Metal Batten Bar	Galvalume AZ55 batten strip	220' long, 1" wide	Firestone Bldg. Products
14.	UltraPly TPO InvisiWeld Plates	High-performance TPO membrane fastening system	3" diameter	Firestone Bldg. Products

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Underwriters Laboratories Inc.	01NK17982	UL 790	06/05/01
	00NK43467	UL 790	0½2/01
	03NK34486	UL 790	03/22/05
Factory Mutual Research Corporation	3032272	FM 4470	05/22/09
	3036642	FM 4470	10/09/09
	3030650	FM 4470	07/10/09
	3035560	FM 4470	01/11/10
	3019991	FM 4470	09/20/05
	3017120	FM 4470	04/30/04
	3038546	FM 4470	12/17/10
	3039133	FM 4470	04/07/11
	3036747	FM 4470	02/12/10
	3040535	FM 4470	10/05/10
	3035017	FM 4470	04/15/09
	3038191	FM 4470	08/04/11
Trinity|ERD	F8300.07.08	TAS 131/ ASTM D6878	07/30/08
	F8300.11.08-R3	TAS 131/ ASTM D6878	02/25/11
PRI Construction Materials Technologies, LLC	FBP-054-02-05, R1	FM 4474/TAS 114 D	02/07/13
	FBP-069-02-01, R1	FM 4474/TAS 114 J	02/07/13
	FBP-070-02-01, R1	FM 4474/TAS 114 J	02/07/13
	FBP-044-02-01, R2	TAS 114 H, J	10/04/12
	FBP-085-02-01, R1	TAS 114 J	10/04/12
	FBP-086-02-01	TAS 114 J	10/04/12

APPROVED ASSEMBLIES

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type A(1): One or more layers of insulation adhered with approved adhesive over existing asphaltic BUR; membrane adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL **Minimum: 1.0" thick**	**N/A**	**N/A**
Tapered ISO 95+ GL **Minimum: ½" thick with a ¼" per ft. taper**	**N/A**	**N/A**
ISOGARD HD **Minimum: ½" thick**	**N/A**	**N/A**
DensDeck, DensDeck Prime **Minimum: ¼" thick**	**N/A**	**N/A**

Note: All layers of insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous 1" minimum beads spaced a maximum of 4" o.c. and allowed to expand to full coverage application prior to placement of the roof cover. The 2" wide roof cover side laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -172.5 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Wood/Gypsum/Cementitious Wood Fiber

System Type A(2): One or more layers of insulation adhered with approved adhesive over existing asphaltic BUR; membrane adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISOGARD HD		
Minimum: ½" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime		
Minimum: ¼" thick	**N/A**	**N/A**

Note: Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or, I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous 1" minimum beads spaced a maximum of 4" o.c. and allowed to expand to full coverage application prior to placement of the roof cover. The 2" wide roof cover side laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type A(3): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck in full mopping of aproved asphalt within the EVT range and at a rate of 20-25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 fully adhered to insulation layer with XR Bonding Adhesive at a rate of 70-90 ft^2/gal. The minimum 3" roof cover laps are sealed with a minimum 1.5 in. heat weld along the outside edge.

Maximum Design Pressure: -300 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type A(4): One or more layers of insulation adhered with approved adhesive; membrane fully adhered with hot asphalt.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck in full mopping of aproved asphalt within the EVT range and at a rate of 20-25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 fully adhered to insulation layer with hot asphalt applied at a rate of 20-25 lbs./sq. The minimum 3" roof cover laps are sealed with a minimum 1.5 in. heat weld along the outside edge.

Maximum Design Pressure: -457.5 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(1): Base layer of insulation mechanically fastened, top layer adhered: membrane adhered with approved adhesive. .

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**1 or 8 with 10**	**1:2 ft^2**
Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1" thick**	**N/A**	**N/A**
(Optional) Additional Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1" thick**	**N/A**	**N/A**
Tapered ISO 95+ GL **Minimum ½" thick with a ¼" per ft. taper**	**N/A**	**N/A**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop E **Minimum ½" thick**	**N/A**	**N/A**
DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. All other layers of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II, I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on outside edge of lap.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(2): Base layer of insulation mechanically fastened, top layer adhered: membrane adhered with approved adhesive. .

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1.5" thick	**1 or 8 with 10**	**1:2 ft^2**
Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1" thick	**N/A**	**N/A**
(Optional) Additional Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft2**
ISO 95+ GL		
Minimum 1" thick	**N/A**	**N/A**
Tapered ISO 95+ GL		
Minimum ½" thick with a ¼" per ft. taper	**N/A**	**N/A**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD		
Minimum ½" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. All other layers of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II, I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous 1" minimum beads spaced a maximum of 4" o.c. and allowed to expand to full coverage application prior to placement of the roof cover. The 2" wide roof cover side laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type B(3): Base layer of insulation mechanically fastened, membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISOGARD HD Composite Minimum 1" thick	**1 or 2 (steel only) with 10 8 (concrete only) with 10**	**1: 1.33 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld along the outside edge.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(4): Base layer of insulation mechanically fastened, top layer adhered; membrane adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**1 or 8 with 10**	**1:1.6 ft^2**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime **Minimum ½" thick**	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 6" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on outside edge of lap.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(5): Base layer of insulation mechanically fastened, top layer adhered; membrane adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 or 8 with 10**	**1:1.6 ft^2**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 6" o.c. I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on outside edge of lap.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(6): Base layer of insulation mechanically fastened, top layer adhered; membrane fully adhered with approved adhesive..

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**8 with 10**	**1:1 ft^2**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Minimum ½" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld along the outside edge.

Maximum Design Pressure: -90 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(7): Base layer of insulation mechanically fastened, membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISOGARD HD Composite Minimum 1.5" thick	**8 with 10**	**1: 1.33 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld along the outside edge.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(8): Base layer of insulation mechanically fastened: membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISOGARD HD Composite Minimum 2" thick	**8 with 10**	**1: 1.33 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld along the outside edge.

Maximum Design Pressure: -120 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(9): Base layer of insulation mechanically fastened, top layer adhered; membrane adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 or 8 with 10**	**1:1 ft^2**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime Minimum ½" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 4" o.c., I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 4" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 4" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on outside edge of lap.

Maximum Design Pressure: -127.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(10): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 & 10 or 8 & 10**	**1:1 ft^2**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Minimum ½" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap.

Maximum Design Pressure: -90 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type B(11): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA Minimum 1.5" thick	**1 & 10 or 8 & 10**	**1:1 ft^2**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA Minimum 1.5" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap.

Maximum Design Pressure: -120 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(1): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations (not to exceed 1" thick for steel deck).

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL **Minimum 1.5" thick (for Concrete Deck)** **Minimum ½" thick (for Steel Deck)**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FiberTop E, ISOGARD HD **Minimum ½" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	**1:5.3 ft^2**
DensDeck; DensDeck Prime **Minimum ¼" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	**1:5.3 ft^2**
Plywood **Minimum 19/32" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	**1:5.3 ft^2**

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6" wide roof cover side laps are sealed with a minimum 1.5" wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(2): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISOGARD HD **Minimum 1" thick**	**1 or 2 (steel only) with 10** **8 (concrete only) with 10**	**1: 1.8 ft^2**

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld along the outside edge.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(3): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**1 or 8 with 10**	**1:2 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with or XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on outside edge of lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(4): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1" thick	**N/A**	**N/A**
Tapered ISO 95+ GL		
Minimum ½" thick with a ¼" per ft. taper	**N/A**	**N/A**

Note: Base layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 2 ¼" thick	**1 or 8 with 10**	**1:4 ft^2**

Additional Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Top layer shall be mechanically attached with fasteners and density described. Additional layers of insulation shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c., I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with or XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on outside edge of lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(5): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

(Optional) Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft2**
Tapered ISO 95+ GL **Minimum ½" thick with a ¼" per ft. taper**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop E **Minimum ½" thick**	**1 or 8 with 10**	**1:2 ft^2**
DensDeck Prime **Minimum ¼" thick**	**1 or 8 with 10**	**1:2 ft^2**
Plywood **Minimum 19/32" thick**	**1 or 8 with 10**	**1:2 ft^2**

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on outside edge of lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel

System Type C(6): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime Minimum ¼" thick	**1 or 2 with 10**	**1:2 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on outside edge of lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel

System Type C(7): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Plywood Minimum 19/32" thick	**1 or 2 with 10**	**1:2 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on outside edge of lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(8): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations (not to exceed 1" thick for steel deck).

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL **Minimum 1.5" thick (for Concrete Deck)** **Minimum ½" thick (for Steel Deck)**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FiberTop E, ISOGARD HD **Minimum ½" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	See Design Pressure
DensDeck; DensDeck Prime **Minimum ¼" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	See Design Pressure
Plywood **Minimum 19/32" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	See Design Pressure

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 3 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressures:	Maximum Pressure	Fastener Spacing	Fastener Row Spacing
	-45 psf. (See General Limitation #7)	12 in.	5 ft.

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel (Existing Structural Non-Insulated Metal Roof Panel Assembly)

System Type C(9): Membrane bonded over preliminarily fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer: To be placed between the ribs or over panels of existing structural metal roof system.	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop E, ISOGARD HD **Minimum ½" thick**	**N/A**	**N/A**
DensDeck; DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**
Plywood **Minimum 19/32" thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO is mechanically fastened to the deck through the insulation to 16 ga. purlins spaced 5 ft. o.c. maximum using Purlin fasteners and UltraPly TPO InvisiWeld Plates, fastened 12" o.c. maximum along the purlins. (Areas where the metal panels do not lay flush on purlin shall have a ¼" pilot pre-drilled into the panel prior to fastening) and then bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 3 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel

System Type C(10): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL Minimum ½" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISOGARD HD Minimum ½" thick	**2 or 1 and 10**	**1:2.7ft^2**

Membrane: UltraPly TPO roof cover is fully adhered to insulation with UltraPly Bonding Adhesives roller at a rate of 60 ft^2/gallon (120 ft^2/gallon to both the underside of membrane and the substrate). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: –45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel (Existing Structural Non-Insulated Metal Roof Panel Assembly)

System Type C(11): Membrane bonded over preliminarily fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer: To be placed between the ribs or over panels of existing structural metal roof system.	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1" thick**	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**
FiberTop E, ISOGARD HD **Minimum ½" thick**	**N/A**	**N/A**
DensDeck; DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**
Plywood **Minimum 19/32" thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Membrane: UltraPly TPO is mechanically fastened to the deck through the insulation to 16 ga. purlins spaced 10-ft o.c. maximum using Purlin fasteners and UltraPly TPO InvisiWeld Plates, fastened 6" o.c. maximum along the purlins. (Areas where the metal panels do not lay flush on purlin shall have a ¼" pilot pre-drilled into the panel prior to fastening) and then bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(12): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISOGARD HD **Minimum ½" thick**	**1 or 2 (steel only) with 10** **8 (concrete only) with 10**	**1: 1.33 ft^2**

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld along the outside edge.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(13): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations (not to exceed 1" thick for steel deck).

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL **Minimum 1.5" thick (for Concrete Deck)** **Minimum ½" thick (for Steel Deck)**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FiberTop E, ISOGARD HD **Minimum ½" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	**1:4 ft^2**
DensDeck; DensDeck Prime **Minimum ½" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	**1:4 ft^2**
Plywood **Minimum 19/32" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	**1:4 ft^2**

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(14): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations (not to exceed 1" thick for steel deck).

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL Minimum 1.5" thick (for Concrete Deck) Minimum ½" thick (for Steel Deck)	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FiberTop E, ISOGARD HD Minimum ½" thick	**1 (steel only) with 14 8 (concrete only) with 14**	**1:2.7 ft^2**
DensDeck; DensDeck Prime Minimum ¼" thick	**1 (steel only) with 14 8 (concrete only) with 14**	**1:2.7 ft^2**
Plywood Minimum 19/32" thick	**1 (steel only) with 14 8 (concrete only) with 14**	**1:2.7 ft^2**

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(15): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 or 8 with 10**	**1:1.6 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of lap.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(16): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations (not to exceed 1" thick for steel deck).

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL **Minimum 1.5" thick (for Concrete Deck)** **Minimum ½" thick (for Steel Deck)**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FiberTop E, ISOGARD HD **Minimum ½" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	See Design Pressure
DensDeck; DensDeck Prime **Minimum ¼" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	See Design Pressure
Plywood **Minimum 19/32" thick**	**1 (steel only) with 14** **8 (concrete only) with 14**	See Design Pressure

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 3 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure:	Maximum Pressure	Fastener Spacing	Fastener Row Spacing
	-82.5 psf. (See General Limitation #7)	6 in.	5 ft.

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel (Existing Structural Non-Insulated Metal Roof Panel Assembly)

System Type C(17): Membrane bonded over preliminarily fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer: To be placed between the ribs or over panels of existing structural metal roof system.	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1" thick**	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**
FiberTop E, ISOGARD HD **Minimum ½" thick**	**N/A**	**N/A**
DensDeck; DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**
Plywood **Minimum 19/32" thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Membrane: UltraPly TPO is mechanically fastened to the deck through the insulation to 16 ga. purlins spaced 5 ft. o.c. maximum using Purlin fasteners and UltraPly TPO InvisiWeld Plates, fastened 6" o.c. maximum along the purlins. (Areas where the metal panels do not lay flush on purlin shall have a ¼" pilot pre-drilled into the panel prior to fastening) and then bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 3 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(18): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations (not to exceed 1" thick for steel deck).

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL Minimum 1.5" thick (for Concrete Deck) Minimum ½" thick (for Steel Deck)	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FiberTop E, ISOGARD HD Minimum ½" thick	**1 (steel only) with 14 8 (concrete only) with 14**	**1:2 ft^2**
DensDeck; DensDeck Prime Minimum ¼" thick	**1 (steel only) with 14 8 (concrete only) with 14**	**1:2 ft^2**
Plywood Minimum 19/32" thick	**1 (steel only) with 14 8 (concrete only) with 14**	**1:2 ft^2**

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6" wide roof cover side laps are sealed with a minimum 1.5" wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -105 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(19): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 or 8 with 10**	**1:1 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 4" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of lap.

Maximum Design Pressure: -142.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(20): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations (not to exceed 1" for steel deck):

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISOGARD HD Minimum 0.5" thick	**1 & 10 or 2 & 10 (for steel) 1 & 10 or 8 & 10 (for concrete)**	**1:33 ft^2**

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel/Concrete

System Type C(21): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations (not to exceed 1" for steel deck):

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISOGARD HD Composite Minimum 1.0" thick	**1 & 10 or 2 & 10 (for steel) 1 & 10 or 8 & 10 (for concrete)**	**1:1.33 ft^2**

Note: All layers shall be simultaneously fastened. See above for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(22): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Composite Minimum 1.5" thick	**1 & 10 or 8 & 10**	**1:1.33 ft^2**

Note: All layers shall be simultaneously fastened. See above for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(23): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Composite Minimum 2.0" thick	**1 & 10 or 8 & 10**	**1:1.33 ft^2**

Note: All layers shall be simultaneously fastened. See above for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -120 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(24): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
RESISTA Minimum 2" thick	**1 & 10 or 8 & 10**	**1:1 ft^2**

Note: All layers shall be simultaneously fastened. See above for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -150 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(25): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA		
Minimum 2" thick	**1 & 10 or 8 & 10**	**1:1.6 ft^2**

Note: All layers shall be simultaneously fastened. See above for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(26): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA		
Minimum 2" thick	**1 & 10 or 8 & 10**	**1:1.33 ft^2**

Note: All layers shall be simultaneously fastened. See above for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -105 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type C(27): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA		
Minimum 1.5" thick	**1 & 10 or 8 & 10**	**1:1.6 ft^2**

Note: All layers shall be simultaneously fastened. See above for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel (Existing Structural Non-Insulated Metal Roof Panel Assembly)

System Type D(1): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer: To be placed between the ribs or over panels of existing structural metal roof system.	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1" thick**	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**
Fiber Top E, ISOGARD HD **Minimum ½" thick**	**N/A**	**N/A**
DensDeck, DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**
Plywood **Minimum 19/32" thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Membrane: UltraPly TPO shall be mechanically fastened to the deck through the insulation to 16 ga. purlins spaced 7.5 ft. maximum with HD Seam Plates and Purlin Fasteners. Fastener rows are spaced at a maximum 7.5 ft. o.c. and fasteners are spaced 12" o.c. within the 6" wide roof cover side laps. (Areas where the metal panels do not lay flush on purlin shall have a ¼" pilot pre-drilled into the panel prior to fastening) The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel (Existing Structural Non-Insulated Metal Roof Panel Assembly)

System Type D(2): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer: To be placed between the ribs or over panels of existing structural metal roof system.	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.0" thick**	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**
FiberTop E, ISOGARD HD **Minimum ½" thick**	**N/A**	**N/A**
DensDeck, DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**
Plywood **Minimum 19/32" thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Membrane: UltraPly QuickSeam R.M.A. Strips shall be mechanically attached over the top insulation to the purlins with Coiled Metal Batten Strips and Purlin Fasteners spaced 6" o.c. along the batten strips. UltraPly QuickSeam R.M.A. Strips are spaced 10 ft. o.c. (centered directly over purlins). (Areas where the metal panels do not lay flush on purlin shall have a ¼" pilot pre-drilled into the panel prior to fastening) UltraPly TPO is adhered to each UltraPly QuickSeam R.M.A. Strip by priming the underside of the roof cover, at the strip locations, with Single-Ply QuickPrime Primer and placing the primed portion of the roof cover onto the strips. Minimum 2" wide side laps are sealed with a minimum 1.5" wide heat weld placed along the outside edge of lap.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel

System Type D(3): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations not to exceed 1" thick.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck Minimum ¼" thick	**N/A**	**N/A**
ISOGARD HD, FiberTop E Minimum ½" thick	**N/A**	**N/A**
ISO 95+ GL Maximum 1" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO is placed over the insulation and mechanically secured to the deck with HD Seam Plates and Heavy Duty Plus Fastener. Fastener rows are spaced at a maximum 7.5 ft. o.c. and fasteners are spaced 12" o.c. within the 6" wide roof cover side laps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete/Steel (complying with ASTM A611 or A653 SS Grade 80)

System Type D(4): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations (not to exceed 1" thick for steel deck).

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck Minimum ¼" thick	**N/A**	**N/A**
ISO 95+ GL, ISOGARD HD, FiberTop E Minimum ½" thick	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: UltraPly TPO is placed over the insulation and mechanically secured to the deck with Heavy Duty Fastener and HD Seam Plates. Fastener rows are spaced at a maximum 7.5 ft. o.c. and fasteners are spaced 12" o.c. within the 6" wide roof cover side laps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7I: Recover, Insulated

Deck Description: Steel (Existing Structural Non-Insulated Metal Roof Panel Assembly)

System Type D(5): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer: To be placed between the ribs or over panels of existing structural metal roof system.	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1" thick**	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**
FiberTop E, ISOGARD HD **Minimum ½" thick**	**N/A**	**N/A**
DensDeck; DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**
Plywood **Minimum 19/32" thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Membrane: UltraPly TPO shall be mechanically attached over the top insulation to the purlins spaced 142" maximum with HD Seam Plates and Purlin Fasteners. Fastener rows are placed at a maximum 142" o.c. and fasteners are spaced 6" o.c. and centered within the 6" wide roof cover side laps. (Areas where the metal panels do not lay flush on purlin shall have a ¼" pilot pre-drilled into the panel prior to fastening) Minimum 6" wide side laps are sealed with a minimum 1.5" wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7: Recover

Deck Description: Steel (Verified to meet ASTM SS Grade 80) / Concrete

System Type E(1): Membrane mechanically fastened over existing roof system.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Barrier: None.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 attached to deck as described below.

Fastening #1: Membrane is mechanically attached using Heavy Duty Plus Fasteners and HD Plus Seam Plates spaced 12" o.c. within minimum 6" wide laps in rows spaced 114" o.c. and sealed with minimum 1.5" heat weld along the outside edge.

Fastening #2: Membrane is mechanically attached using Heavy Duty Fasteners and HD Seam Plates spaced 6" o.c. within minimum 6" wide laps in rows spaced 114" o.c. and sealed with minimum 1.5" heat weld along the outside edge.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7: Recover

Deck Description: Steel

System Type E(2): Membrane mechanically fastened over existing roof system.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Barrier: None.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 attached to deck as described below.

Fastening: Membrane is mechanically attached using Heavy Duty Plus Fasteners and HD Plus Seam Plates spaced 6" o.c. within minimum 6" wide laps in rows spaced 114" o.c. and sealed with minimum 1.5" heat weld along the outside edge.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 7:	Recover, Non-Insulated
Deck Description:	Min. 300 psi Generic Cellular Lightweight Concrete cast over steel deck. *Lightweight concrete should record a Minimum Characteristic Resistance Force (MCRF) of 390 lbf when tested with Heavy Duty Fasteners installed through the LWC to the steel deck in accordance with TAS 105.
System Type E(3):	Membrane attached over existing single-ply roof system.
Deck:	Minimum 22 gauge B-deck is secured to supports spaced a maximum of 6 ft. o.c. with #12-24 x 1-1/4" HWH SD screws with ½" washers spaced at 6" o.c. Side lap fasteners secured with #1/4-14 x 7/8" HWH SD screws with ½" washers spaced 12" o.c.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane:	UltraPly TPO attached through the lightweight concrete and engaged to the steel deck as described below:
Fastening:	Membrane is mechanically attached using Polymer Batten Strip spaced 4 ft. o.c. and fastened to deck with Heavy Duty fasteners spaced 6" o.c. along the batten strip. A 6" wide UltraPly TPO Cover Strip is heat welded over battens with 1.5 in. wide heat welds. The roof cover side and end laps are sealed with a minimum 1.5" heat weld on the outside edge of the lap
Maximum Design Pressure:	-97.5 psf. (See General Limitation #7)

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 7:	Recover, Non-Insulated
Deck Description:	Min. 300 psi Generic Cellular Lightweight Concrete cast over steel deck. *Lightweight concrete should record a Minimum Characteristic Resistance Force (MCRF) of 450 lbf when tested with Heavy Duty Fasteners installed through the LWC to the steel deck in accordance with TAS 105.
System Type E(4):	Membrane attached over existing single-ply roof system.
Deck:	Minimum 22 gauge B-deck is secured to supports spaced a maximum of 6 ft. o.c. with #12-24 x 1-1/4" HWH SD screws with ½" washers spaced at 6" o.c. Side lap fasteners secured with #1/4-14 x 7/8" HWH SD screws with ½" washers spaced 12" o.c.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane:	UltraPly TPO XR 100 or UltraPly TPO XR 115 is attached through the lightweight concrete and engaged to the steel deck as described below:
Fastening:	Membrane is mechanically attached using Polymer Batten Strip spaced 4 ft. o.c. and fastened to deck with Heavy Duty fasteners spaced 6" o.c. along the batten strip. A 6" wide UltraPly TPO Cover Strip is heat welded over battens with 1.5" wide heat welds. The roof cover side and end laps are sealed with a minimum 1.5" heat weld on the outside edge of the lap
Maximum Design Pressure:	-112.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7: Recover

Deck Description: Steel/Concrete/Wood/Gypsum/Cementitious Wood Fiber

System Type F(1): Membrane adhered to existing asphaltic BUR

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2" roof cover side laps are sealed with a minimum 1.5" heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7: Recover

Deck Description: Steel/Concrete/Wood/Gypsum/Cementitious Wood Fiber

System Type F(2): Membrane adhered to existing granule surfaced asphaltic modified bitumen roof systems.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. The 2" roof cover side laps are sealed with a minimum 1.5" heat weld on the outside edge of the lap.

Maximum Design Pressure: -142.5 psf. (See General Limitation #9) for Steel and Concrete decks.
-45 psf. (See General Limitation #9) for all other deck types.

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7: Recover

Deck Description: Concrete

System Type F(3): Membrane adhered to existing asphaltic BUR

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous 1" minimum beads spaced a maximum of 4" o.c. and allowed to expand to full coverage application prior to placement of the roof cover. The 2" wide roof cover side laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap

Maximum Design Pressure: -315 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7: Recover

Deck Description: Steel/Concrete

System Type F(4): Membrane adhered to existing asphaltic roof system.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: One ply of UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with hot asphalt at a rate of 20-25 lb./sq. Minimum 3" roof cover laps are sealed with a minimum 1.5" heat weld along the outside edge.

Maximum Design Pressure: -495 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7: Recover

Deck Description: Concrete

System Type F(5): Membrane adhered to existing torch adhered granule surfaced SBS Modified Roofing.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 Reinforced Membrane adhered to existing roof system with XR Stick Membrane Adhesive applied in ¾ - 1 in. wide ribbons spaced 12" o.c The 2" roof cover side laps are sealed with a minimum 1.5" heat weld on the outside edge of the lap.

Maximum Design Pressure: -122.5 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 7: Recover

Deck Description: Concrete

System Type F(6): Membrane adhered to existing asphaltic roof system.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous 1" minimum beads spaced a maximum of 4" o.c. and allowed to expand to full coverage application prior to placement of the roof cover. The 2" wide roof cover side laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -172.5 psf.; (See General Limitation #9)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer.
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE